Anaesthesia
Personalised

Bispectral Index™ (BIS™) monitoring system product guide

The Bispectral Index™ (BIS™) monitoring system can give you meaningful information to help individualise anaesthetic dosage.

When compared to not using BIS™, studies show that BIS™ technology-guided anaesthesia:

**Reduces:**
- Anaesthesia use by as much as 38 percent\(^1\)-\(^7\)
- Awareness with recall by 64 percent\(^8,9\)
- Incidence of postop complications\(^3,10,11\)
- Anaesthesia and patient care costs\(^8,12-17\)

**Less incidence of:**
- Postop delirium in elderly and at-risk patients\(^3,6,7,10,11,15-17,19\)

**Improves:**
- Patient satisfaction\(^20\)
- Patient recovery from anaesthesia\(^2,14,20\)

**Faster:**
- Wake ups\(^1,2\)
- Recovery time\(^1,2,7,20\)

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**Data Insights**

Data based on objective, quantified science. We know how important it is.

BIS™ system monitors use innovative technology to link patient-specific EEG information to individual clinical states.

**Here’s how it works:**

1. Sensors collect the raw EEG data that indicates brain activity in real time.
2. The system uses its clinically validated algorithm to filter, analyse, and correlate the data.
3. Results are continually calculated and displayed as the BIS™ index value (a number between 0 and 100), indicating the patient’s response to anaesthetic agents.

You may decrease post anaesthesia complications by customising individual dosing to keep the BIS™ monitor value within the target range during all phases of anaesthesia\(^1,5,8,9,20-23\).
2-channel monitor
The BIS™ monitoring system with 3.50 software — a full featured, anaesthetic depth monitoring solution. Features:
• Density Spectral Array (DSA) with visual display of EEG bands
• Spectral Edge Frequency (SEF)
• Median Frequency (MF) 1–34–6, 10, 12
• Suppression Time (ST)
• Suppression Ratio (SR)

Part number 186-1046

4-channel monitor
The same BIS™ monitoring system with 3.50 software also with enhanced bihemispheric capabilities. Combine it with our bilateral sensors to detect hemispheric differences in the brain. It has the same features as the 2-channel monitor, but also includes:
• Asymmetry indicator (ASYM)
• Ability to display from the left and right side of the brain
• Burst Count

Part number 186-1046

BIS™ LoC 2 channel with patient interface cable (PIC+)
Product ID: 186-0195-AMS
PIC+ only: 186-0107

BIS™ LoC 4 channel with patient interface cable (PIC-4)
Product ID: 186-0224-AMS
PIC-4 only: 186-1018-AMS-
High-quality sensors that are easy to apply, with positioning instructions printed right on them. They adhere well to skin and are comfortable for your patient. Limited to short term use (maximum of 24 hours).

**BIS™ quatro 4-electrode sensor**
Measures brain activity in adult patients undergoing general anaesthesia or sedation.
Part number 186-0106, box of 25

**BIS™ bilateral sensor**
Lets you detect hemispheric differences in the brain, which may be useful for advanced monitoring applications.
Part number 186-0212, box of 10
**Not compatible with BIS™ 2-channel systems. BIS™ LOC 4-channel cables required.**

**BIS™ pediatric sensor**
Measures brain activity in paediatric patients.
Part number 186-0200, box of 25
*Ages four and up recommended.

**BIS™ extend sensor (extended use)**
Measures brain activity in adult patients who require longer periods of monitoring, including those in the ICU.
Part number 186-0160, box of 25

Talk to your Medtronic representative to order BIS™ monitors and sensors.
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7. Song D, Joshi GP, White PF. Titration of volatile anaesthetics using bispectral index facilitates recovery after ambulatory anaesthesia. Anesthesiology. 1997;87(4):842-8. (BIS monitor and disposable electrodes provided by Aspect Medical Systems, now Covidien/Medtronic)

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12. Klopmann M, Sebel P. Cost-effectiveness of bispectral index monitoring. Curr Opin Anaesthesiol. 2011;24(2):177-181. (No funding or sponsorship provided by Medtronic for this study)


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15. Ahmad S, Yilmaz M, Marcus RJ, Glisson S, Kinsella A. Impact of bispectral index monitoring on fast tracking of gynecologic patients undergoing laparoscopic surgery. Anesthesiology. 2003 Apr;98(4):849-852. (Supported in part by a grant from Aspect Medical Systems - now Covidien/Medtronic)


20. Luginbühl M, Wüthrich S, Petersen-Felix S, Zbinden AM, Schneider TW. Different benefit of bispectral index (BISTM) in desflurane and propofol anesthesia. Acta Anaesthesiol Scand. 2003;47(2):165-173. (No funding or sponsorship provided by Medtronic for this study)

21. White FF, Ma H, Tang J, et al. Does the use of electroencephalographic bispectral index or auditory evoked potential index monitoring facilitate recovery after desflurane anesthesia in the ambulatory setting? Anesthesiology. 2004;100:811-817. (No funding or sponsorship provided by Medtronic for this study)
